

WHAT IS CLAIMED IS:

1 1. A mobile communication system comprising:
 2 a content server for providing content data requested via
 3 a network;
 4 a mobile communication terminal for issuing a request to
 5 provide said content data via a mobile communication network; and
 6 a plurality of gateway units located respectively in
 7 predetermined areas, for executing protocol conversion of said
 8 request and said content data transmitted between said network
 9 and said mobile communication network and for continuously
 10 providing said content data from said content server to said
 11 mobile communication terminal by transmitting and receiving
 12 communication information to provide said content data.

1 2. The mobile communication system according to Claim
 2 1, wherein each of said plurality of gateway units comprises:
 3 a service management information storing section for storing
 4 service management information including at least identification
 5 information of said content data so as to correspond to
 6 identification information of said mobile communication terminal
 7 to which said content data is provided via each of said plurality
 8 of gateway units;
 9 an inquiry section, when said request is received from said
 10 mobile communication terminal, for inquiring of each of other
 11 gateway units whether said identification information of said
 12 mobile communication terminal is registered in said service
 13 management information storing section using said identification
 14 information as a search key;

15 a search section for searching said service management
16 information in response to an inquiry from said inquiry section
17 of an arbitrary one of other gateway units;

18 a communication information transmitting section, when said
19 identification information of said mobile communication terminal
20 is searched by said search section, for transmitting
21 communication information used to provide said content data to
22 said identification information of said mobile communication
23 terminal to said gateway unit which has issued said inquiry;

24 a content request section for requesting said content server
25 to provide said content data corresponding to said request based
26 on said communication information transmitted by said
27 communication information transmitting section of each of said
28 other gateway units in accordance with said inquiry from said
29 inquiry section; and

30 a content transferring section for transferring said content
31 data from said content server, said content data requested by said
32 content request section to said mobile communication terminal.

1 3. The mobile communication system according to Claim
2 1, wherein said mobile communication network includes a plurality
3 of radio communication base stations, each of said radio
4 communication base stations which cover an area smaller than each
5 of said predetermined areas and communicate one another, and at
6 least one of said plurality of radio communication base stations
7 transmits said request to a predetermined gateway unit among said
8 plurality of gateway units.

1 4. The mobile communication system according to Claim

2 3, wherein said request is transmitted to a gateway unit
3 geographically nearest to said mobile communication terminal.

1 5. The mobile communication system according to Claim
2 2, wherein said mobile communication terminal is a cellular
3 telephone and said identification information of said mobile
4 communication terminal is a telephone number.

1 6. A mobile communication system comprising:

2 a mobile communication terminal for issuing a request to
3 provide content data via a mobile communication network;

4 a plurality of gateway units, each of said gateway units
5 located respectively in predetermined areas and including a
6 protocol conversion section for executing protocol conversion of
7 said request and said content data transmitted between a
8 predetermined network and said mobile communication network, a
9 request relay section for relaying said request and a terminal
10 providing section for providing said content data to said mobile
11 communication terminal in accordance with said request relayed
12 by said request relay section; and

13 a content server for providing said content data to a
14 gateway unit which has issued said request relayed by said request
15 relay section via said predetermined network.

1 7. The mobile communication system according to Claim
2 6, wherein said mobile communication network includes a plurality
3 of radio communication base stations, each of said radio
4 communication base stations which cover an area smaller than each
5 of said predetermined areas and communicate one another, and at

6 least one of said plurality of radio communication base stations
7 transmits said request to a predetermined gateway unit among said
8 plurality of gateway units.

1 8. The mobile communication system according to Claim
2 7, wherein said request is transmitted to a gateway unit
3 geographically nearest to said mobile communication terminal.

1 9. A mobile communication method in a mobile
2 communication system including a content server for providing
3 content data requested via a network; a mobile communication
4 terminal for issuing a request to provide said content data via
5 a mobile communication network; and a plurality of gateway units
6 located respectively in predetermined areas, for executing
7 protocol conversion of said request and said content data
8 transmitted between said network and said mobile communication
9 network and for continuously providing said content data from said
10 content server to said mobile communication terminal by
11 transmitting and receiving communication information to provide
12 said content data, said mobile communication method comprising:
13 a service management information storing step of storing
14 service management information including identification
15 information of said content data so as to correspond to
16 identification information of said mobile communication terminal
17 to which said content data is provided via each of said plurality
18 of gateway units, said service management information is
19 registered in a service management information storing section;
20 an inquiry step, when said request is received from said
21 mobile communication terminal, of inquiring of each of other

22 gateway units whether said identification information of said
 23 mobile communication terminal is registered in said service
 24 management information storing section using said identification
 25 information as a search key;

26 a search step of searching service management information
 27 of said each of said plurality of gateway units in response to
 28 an inquiry from an arbitrary one of other gateway units;

29 a communication information transmitting step, when said
 30 identification information of said mobile communication terminal
 31 is searched by said search step, of transmitting communication
 32 information used to provide said content data to said
 33 identification information of said mobile communication terminal
 34 to said gateway unit issuing said inquiry;

35 a content request step of requesting said content server to
 36 provide said content data corresponding to said request based on
 37 said communication information transmitted by said communication
 38 information transmitting step in each of said other gateway units
 39 in accordance with said inquiry; and

40 a content transferring step of transferring the requested
 41 content data from said content server to said mobile communication
 42 terminal.

1 10. A mobile communication program used in a mobile
 2 communication system including a content server for providing
 3 content data requested via a network; a mobile communication
 4 terminal for issuing a request to provide said content data via
 5 a mobile communication network; and a plurality of gateway units
 6 located respectively in predetermined areas, for executing
 7 protocol conversion of said request and said content data

8 transmitted between said network and said mobile communication
9 network and for continuously providing said content data from said
10 content server to said mobile communication terminal by
11 transmitting and receiving communication information to provide
12 said content data, said mobile communication program comprising:

13 a service management information storing step of storing
14 service management information including identification
15 information of said content data so as to correspond to
16 identification information of said mobile communication terminal
17 to which said content data is provided via each of said plurality
18 of gateway units, said service management information is
19 registered in a service management information storing section;

20 an inquiry step, when said request is received from said
21 mobile communication terminal, of inquiring of each of other
22 gateway units whether said identification information of said
23 mobile communication terminal is registered in said service
24 management information storing section using said identification
25 information as a search key;

26 a search step of searching service management information
27 of said each of said plurality of gateway units in response to
28 an inquiry from an arbitrary one of other gateway units;

29 a communication information transmitting step, when said
30 identification information of said mobile communication terminal
31 is searched by said search step, of transmitting communication
32 information used to provide said content data to said
33 identification information of said mobile communication terminal
34 to said gateway unit issuing said inquiry;

35 a content request step of requesting said content server to
36 provide said content data corresponding to said request based on

37 said communication information transmitted by said communication
38 information transmitting step in each of said other gateway units
39 in accordance with said inquiry of said inquiry section; and
40 a content transferring step of transferring the requested
41 content data from said content server to said mobile communication
42 terminal.

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